

REMARKS

This application contains claims 1-56. Claims 1-50 have been canceled without prejudice. New claims 51-56 have been added. No new matter has been introduced. Reconsideration is respectfully requested.

Applicant thanks Examiner Scully for the courtesy of a telephone interview with Applicant's representative, Daniel Kligler (Reg. No. 41,120), held December 8, 2010. In the interview, Dr. Kligler presented a draft amendment with claims similar to new claims 51 and 56. The Examiner suggested that the claims recite that the various layers are formed "directly" one on the other, in order to sharpen the distinction of the claimed invention over the cited art, and Applicant has amended the claims accordingly. The Examiner indicated that further search and evaluation would be carried out after filing of the formal amendment.

Claims 26 and 29-38 were rejected under 35 U.S.C. 103(a) over Nathan et al. (U.S. Patent 6,197,450) in view of one or more of Delnick et al. (U.S. Patent 6,316,142), Palmer et al. (U.S. Patent 4,416,915), and Rigal et al. (U.S. Patent 4,346,153). In view of the cancellation of claims 26 and 29-38, this rejection is now moot. New claims 51-56 are believed to distinguish the present invention over these references, as explained below.

New claim 51 is based on original claims 26 and 27, with additional features from the specification (paragraphs 0068-0069 in the published version of this application, US 2006/0032046, as well as subsequent examples). Claim 51 recites a microbattery produced on a substrate with a very specific ordering of layers: First a conductive layer (for current collection), followed by a cathode, an electrolyte, and an anode. The conductive

layer comprises a certain metal element, and the thin-film cathodic layer on the conductive layer comprises an electrochemically-formed sulfide of the same metal element. Forming this sort of thin-film cathodic layer, based on the conductive layer itself, was made possible by novel processes developed by the inventors, which are described in detail in the present patent application. A microbattery of this sort is neither taught nor suggested by the prior art.

New claims 52-55 depend from claim 51 and recite further novel features of the microbattery, which are described particularly in paragraphs 0057 and 0068 of the published application.

New claim 56 is based generally on claims 26, 29 and 32 as filed and is supported in Fig. 1 and in paragraph 0057 of the published application. The claim recites a microbattery produced on and in the cavities of a perforated semiconductor substrate with the same ordering of layers as in claim 51: conductive layer, cathode, electrolyte, and anode. As explained in the specification (paragraph 0067), this ordering of the layers is the reverse of microbatteries of this sort that were known in the art, such as the designs described by Nathan. The cathode-first design recited in new claim 56 is thus both novel and non-obvious over the cited art.

Applicant believes the amendments and remarks presented above to be fully responsive to all of the grounds of rejection raised by the Examiner. In view of these amendments and remarks, all of the claims now pending in this application are believed to be in condition for allowance. Prompt notice to this effect is requested.

Respectfully submitted,
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